

Negation, focus and tense: the Arabic *maa* and *laa*

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The two major negation elements in Standard Arabic, *maa* and *laa*, have different functional properties and distribution. *Maa* interacts with focus/modalily, and acts as a marker of negative contrastive focus. This means that *maa* is the spell out of focus and negation features encoded in the structural description of relevant sentences. On the other hand, *laa* and its temporal variants (*lam* (past) and *lan* (future)) interact with tense in the sense that they mark the tense of the sentence. These elements are argued, following Benmamoun (1990, 1992), to project a NegP and their interaction with tense is explained in terms of Neg-movement to T/I. The analyses outlined in this paper are couched within a framework which assumes that the abstract features encoded in structural descriptions, crucial for their interpretation, are subject to the requirement that they be recoverable from properties of surface strings. This requirement, called here the Identification Requirement, determines the movement of focus-phrases and *wh*-phrases, as well as movement of the verb complex and other head complexes, to appropriate positions in structural descriptions.

1. Negation in Standard Arabic.

Standard Arabic has two major negation elements. One, which we will represent here with *laa*, interacts with tense insofar as it marks the tense value of the sentence, in addition to marking sentence negation (Benmamoun 1990, 1992):

- (1) a. *laa y- uhibbu Zayd-un al- qiraa?at-a*
NEG+PRES 3M-like(IMPERF) Zayd-NOM the-reading -ACC
'Zayd does not like reading.'
b. *lan t- usaafira Zaynab-u*
NEG+FUT 3F-travel(IMPERF) Zaynab-NOM
'Zaynab will not travel.'
c. *lam y- ughaadir Zayd-un al- balad -a*
NEG+PAST 3M-leave(IMPERF) Zayd-NOM the-country-ACC
'Zayd has not left the country.'

Lan (1b) and *lam* (1c) are the future tense and past tense variants of *laa*, respectively. We will see below that present tense is generally not morphologically marked in Standard Arabic, so that *laa* represents the unmarked form of the negation element in question. Note that in all three examples the verb is in the imperfective form (IMPERF), which, as we will see below, is generally unmarked for tense, contrary to the perfective forms which are marked for past tense.

The unmarked form *laa* also appears with imperatives, again in conjunction with the imperfective form of the verb:

- (2) *laa* t- adrib ?akha- a -ka!
 NEG 2MS-hit brother-ACC-your
 'Don't hit your brother!'
 b. **lam*/ lan t- adrib ?akha -a -ka!
 NEG+PAST NEG+FUT 2MS- hit brother-ACC-your

As shown in (2b), the temporally marked negation elements *lam* and *lan*, contrary to *laa*, cannot be used to negate an imperative. This is to be expected on the assumption that imperatives, like present tense indicatives, lack tense marking (see also Zanuttini: this volume).

The other negation element *maa* differs from *laa* and its temporal variants in that it does not carry information relating to the tense of the sentence:

- (3) a. *maa* y- uhibbu Zayd-un al-qiraa?at-a
 NEG 3M-like(IMPERF) Zayd-NOM the-reading-ACC
 'Zayd does not like reading.'
 b. *maa* sa- t- usaafiru Zaynab-u
 NEG FUT-3F-travel(IMPERF) Zaynab-NOM
 'Zaynab will not travel.'
 c. *maa* ghaadar -a Zayd-un al-balad -a
 NEG leave(PERF)-3M Zayd-NOM the-country-ACC
 'Zayd has not left the country.'

In (3a), where the verb is in the imperfective form, and therefore unmarked for tense, the present tense reading is achieved via a default mechanism which will be discussed in sections 5 and 6. In (3b), where the verb is also in the imperfective form, the future tense reading is conveyed by the morpheme *sa-*, which is a reduced form of the modal-like element *sawfa*. Finally, in (3c) the past tense reading is conveyed by the perfective form of the verb.

Although *maa* does not interact with tense, it does interact with focus and, to some extent, also modality. This is more clearly shown in the following examples:

- (4) a. *maa* riwaayat-an ?allaf -at Zaynab-u (bal qasiidat-an)
 NEG novel-ACC write(PERF)-3F Zaynab-NOM but poem-ACC
 'It is not a novel Zaynab has written (but a poem).'
 b. RIWAAYAT-AN ?allaf -at Zaynab-u (laa qasiidat-an)
 novel-ACC write(PERF)-3F Zaynab-NOM not poem-ACC
 'It is a novel Zaynab has written (not a poem).'

As shown by the English translation and the adversative continuation included in brackets, *maa* in (4a) negates and contrastively focuses the preposed object immediately following it. (4a) is an instance of what we will call here negative contrastive focus, compared to (4b) which is an instance of affirmative contrastive focus.

There is a sense in which contrastive focus (both negative and affirmative) is a form of assertion, in the sense of Searle (1983) (see also Palmer 1990). Negative contrastive focus is used to assert the falsity of a given prevailing piece of information, which can be encoded in a whole proposition (sentence), as in (3a-c), or in just a constituent of a sentence, as in (4a-b). Thus, (3c) asserts the falsity of the claim that Zayd has left the country. (4a), on the other hand, asserts the falsity of the claim that what Zaynab has written is a novel (as opposed to a poem, a short story, etc.). The proposition that Zaynab has written something (the presupposition) is not in question. Affirmative contrastive focus, on the other hand, is used to assert the truthfulness of a given piece of information.

To the extent that assertion invariably implies certainty (a clear modal category), instances of contrastive focus (both affirmative and negative) are also instances of modality, more precisely, epistemic modality. This means that *maa*, and other elements to be discussed below, expresses modality (certainty) by virtue of being a marker of (negative) contrastive focus. The link between modality and a particular type of negation in Modern Greek is discussed in Agouraki (1993) and Tsimpli & Roussou (1993). On the other hand, the link between modality and negation in early child language has been evident for a long period of time. For a discussion of this issue and a review of the relevant literature see Tsimpli (1992).

An additional negation element usually thought to be independent of *laa* and *maa* is *laysa*, sometimes called a "negative auxiliary". This element is found mainly with the negative counterparts of nominal sentences:

- (5) a. Zaynab-u shaa'irat-un
 Zaynab-NOM poet-NOM
 'Zaynab is a (female) poet.'
 b. lays -at Zaynab-u shaa'irat-an
 NEG(PERF)-3F Zaynab-NOM poet-ACC
 'Zaynab is not a (female) poet.'

As shown in (5b), *laysa* is in the perfective form, inflects for subject agreement, and causes the nominal predicate to bear accusative Case, rather than nominative Case as is the situation in (5a). All these properties indicate that *laysa* is a verbal form, so that (5b), strictly speaking, is not a nominal sentence, unlike (5a). The reason why (5b) has a present tense reading even though *laysa* is in the perfective form will be explained in section 6 below.

It is possible to decompose *laysa* into a combination of distinct morphemes, one of which, i.e. *-s-*, is a kind of copula. The others are the subject agreement morpheme, which is *-at* in (5b), and the unmarked negation element *laa*. Note that *laa* alone cannot negate a nominal sentence, contrary to *maa*:

- (6) a. (**laa*) Zaynab-u (**laa*) shaa'irat-un/-an
 NEG Zaynab-NOM NEG poet -NOM/-ACC
 'Zaynab is not a (female) poet.'
 b. *maa* Zaynab-un shaa'irat-un
 NEG Zaynab-NOM poet -NOM
 'Zaynab is not a (female) poet.'

The fact illustrated in (6a) supports the idea that *laysa* is decomposable in the way outlined. Because *laa* alone cannot negate a nominal sentence, the verbal particle *-s-* is forced to appear, and hence the verbal properties of (negative) sentences with *laysa*.

On the other hand, the fact that *laa* alone cannot negate a nominal sentence indicates that *laa* is sensitive to the presence of a verb, in the sense that it can only occur in a sentence which includes a verb. In contrast to *laa*, the negation element *maa* alone can negate a nominal sentence, as shown in (6b), suggesting that, unlike *laa*, it is not sensitive to the presence of a verb. This is a particularly significant difference between the two elements, insofar as it suggests that *laa* is a functional category which interacts (in selectional terms) with the verb and the functional categories of the sentence, whereas *maa* is unlikely to have the same status. This is one of the basic claims of this paper, which will be further developed in the remaining sections.

A proper analysis of the properties and distribution of *maa*, obviously, requires a prior understanding of the phenomenon of focus and modality in the language, and an analysis of *laa* requires an understanding of the tense system of the language. Thus, the section dealing with *maa* (*Negation and focus*) is preceded by a section dealing with focus and modality, and the section dealing with *laa* (*Negation and tense*) is preceded by a section dealing with tense and the way it interacts with subject agreement.

2. Focus and modality.

In Standard Arabic, as in many other languages, focus phrases (*f*-phrases) can be found either *in-situ* or preposed to the sentence-initial position:

- (7) a. 2allaf -at Zaynab-u QASIIDAT-AN
 write(PERF)-3F Zaynab-NOM poem-ACC
 'Zaynab has written a POEM.'
 b. QASIIDAT-AN 2allaf -at Zaynab-un
 poem-ACC write(PERF)-3F Zaynab-NOM
 'It is a poem Zaynab has written.'

Moutaouakil (1989) has argued that there is a difference in interpretation (or "pragmatic function") between the *f*-phrase *in-situ* in (7a) and its preposed counterpart in (7b). The former is an instance of "new (information) focus", usually found in contexts where the speaker is giving new information. The latter, however, is an instance of "contrastive focus", usually found in contexts where the speaker gives information which is in conflict with existing information.

Thus, while (7a) represents a felicitous answer to the *wh*-questions *maadha 2allafat Zaynabu?* 'What has Zaynab written?' and *maa al-khabaru?* 'what is up/new?', example (7b) does not represent a felicitous answer to either of these two questions. Given that *wh*-questions usually ask for new information they are expected to be compatible with new focus but not with contrastive focus.

The difference in interpretation between (7a) and (7b) seems, initially, to suggest that contrastive focus is a function of a given position which corresponds linearly to the initial position of the sentence. However, this is not likely to be the case as it is possible for a given *f*-phrase to receive a contrastive focus reading *in-situ*, albeit under restricted, but significant, conditions:

- (8) a. SHAA'IRAT-UN Zaynab-u (laa riwaa2iyyat-un)
 poet-NOM Zaynab-NOM not novelist-NOM
 'Zaynab is a POET (not a novelist).'
 b. 2inna Zaynab-a (laa-) SHAA'IRAT-UN (laa riwaa2iyyat-un)
 FM Zaynab-ACC FM poet-NOM not novelist-NOM
 'Zaynab is a POET (not a novelist).'

In (8b) the *f*-predicate receives a contrastive focus reading even though it is *in-situ*. (8a) is parallel to (7b) insofar as the *f*-phrase is preposed to the initial position of the sentence. (8b), on the other hand, differs from (7b) and (8a) in that the *f*-phrase is *in-situ*, and from (7a) in that it is introduced by the element *2inna*, glossed as a focus marker (FM). The presence of *2inna* in (8b) is what is meant by "restricted

conditions". The ability of the predicate in (8b) to receive a contrastive focus reading *in-situ* apparently crucially depends on the presence of *ʔinna*. The latter can be said to "license" a contrastive *f*-phrase *in-situ*, although the terminology is slightly misleading as we will see below. The point is that it is possible for an *f*-phrase to receive a contrastive focus reading *in-situ*, provided that the sentence is introduced by *ʔinna*. In view of this, contrastive focus is not a function of a given position in the sentence, but is achieved via a combination of factors to be spelled out.

In traditional grammar, *ʔinna* and a number of other similar morphemes, such as *ʔinnamaa* and *qad*, are grouped together under the label *al-muʔakkidaat* "the corroborative (or reinforcing) morphemes". Their function is to highlight a given constituent in the sentence, as in (8b), or the whole proposition expressed by the sentence, as in the following examples:

- (9) a. *ʔinna* Zaynab-a laa t-ʔullifu shi'r-an
 FM Zaynab-ACC NEG 3F-write(IMPERF) poetry-ACC
 '(I assert that) Zaynab (indeed) does not write poetry.'
 b. *qad* wasal -a Zayd-un
 FM arrive(PERF)-3M Zayd-NOM
 '(I assert that) Zayd has arrived.'

In these examples *ʔinna* and *qad* are used to assert the truthfulness of the proposition expressed by the sentence. Note that the presence of *ʔinna/qad* implies a context of uncertainty or claims to the contrary, which is not necessarily implied by equivalent sentences which lack *ʔinna/qad*. In other words, (9a-b) apparently do not have the neutral reading that their counterparts without *ʔinna/qad* have.

In (8b) the scope of *ʔinna* is restricted to the predicate, in the sense that it is not the fact that Zaynab is something/somebody that is asserted, but the fact that Zaynab is a poet. The same reading is achieved in (8a) by preposing the predicate, so that contrastive focus in general is a form of assertion. As pointed out in the previous section, insofar as assertion implies certainty, and therefore is an instance of epistemic modality, *al-muʔakkidaat* are markers of modality. As a matter of fact, *qad* can have a different epistemic modality reading when combined with the imperfective form of the verb, namely possibility:

- (10) *qad* ya-sduqu al-kadhuub -u
 may 3M-tell-truth(IMPERF) the-habitual liar-NOM
 'The habitual liar may sometimes tell the truth.'

Thus, in addition to a focus reading, members of the class of *al-muʔakkidaat* clearly have a modality reading, albeit as a consequence of an interaction with the temporal properties of the sentence.

Going back to example (8b), the particle *la-* prefixed to the *f*-predicate is also glossed as a focus marker. Its role seems to be similar to that of tonic accent (focal stress) in that it serves the function of identifying the constituent which is being contrastively focused. In view of this, *la-* can be considered to be a constituent focus marker. This particle can also be found in situations where the verb alone is focused, in which case it functions in correlation with the suffix *-nna*, called in traditional grammar *al-nuun al-muʔakkida* 'the corroborative (or reinforcing) n':

- (11) LA ʔU-HAARIBA-NNA al-'aduww-a (hattaa al-nasr)
 FM 1M-fight -FM the-enemy -ACC till the-victory
 'I WILL fight the enemy (till victory).'

This form (sometimes called the "energetic form") clearly conveys a focus/modal reading which parallels that of the English *will* (intention / determination), as shown in the English translation. These readings are conveyed by the particles *la-*, prefixed to the imperfective form of the verb, and *-nna*, suffixed to the imperfective form of the verb.

Notice that the suffix *-nna* is partially identical to *ʔinna*, suggesting that the latter is probably decomposable into the suffix *-nna* and the element *ʔi-* which serves as a morphological prop for it (see Kahalaily 1993 for a similar analysis). In (11) *la-* is the constituent focus marker, and *-nna* the sentence focus marker, in the sense that, like *ʔinna*, the suffix *-nna* originates in the initial position of the sentence, and presumably pulls the verbal complex, including *la-*, to it. The structural representation of focus markers is discussed later on.

The generalisation which emerges concerning the strategies of achieving a contrastive focus reading is the following: contrastive focus reading of a given *f*-phrase can be achieved either by preposing the *f*-phrase or by leaving it *in-situ* and including a sentence focus marker in the left-peripheral position of the sentence. The former strategy is illustrated in (8a), and the latter in (8b).

Interestingly, the two strategies of obtaining a contrastive focus reading parallel the (more familiar) strategies of obtaining the *wh*-question reading. As is well-known, English-type languages form simple *wh*-questions by preposing the *wh*-phrase, whereas Japanese-type languages form *wh*-questions by leaving the *wh*-phrase *in-situ* and including a Q-morpheme in the sentence. The Q-morpheme is the *wh*-counterpart of the Standard Arabic sentence focus markers such as *ʔinna*. To facilitate the ensuing discussion, we will refer to these (sentence) focus markers as F-morphemes.

As far as *wh*-questions are concerned, Standard Arabic belongs to the English-type, whereas Iraqi Arabic belongs to the Japanese-type, except that Iraqi Arabic also has the *wh*-preposing strategy (Wahba 1991):

- (12) a. man qaabal-a Zayd-un?
 who meet -3M Zayd-NOM
 'Who did Zayd meet?'
 b. qaabal-a Zayd-un man!
 meet -3M Zayd-NOM who
 'Zayd met who!'
- (13) a. meno Mona radat Ali ygaabal?
 who Mona wanted Ali to-meet
 'Who did Mona want Ali to meet?'
 b. sh raadat Mona Ali ygaabal meno?
 Q want Mona Ali to-meet who
 'Who did Mona want Ali to meet?'

The Standard Arabic example (12b) can only have an echo-question reading, on a par with its English counterpart. In contrast, the parallel Iraqi Arabic example (13b) has a *wh*-question reading. This is due to the fact that Iraqi Arabic, unlike Standard Arabic, has a Q-morpheme, namely *sh*- attached to the verbal complex. Example (13a) shows that Iraqi Arabic also possesses the *wh*-preposing strategy.

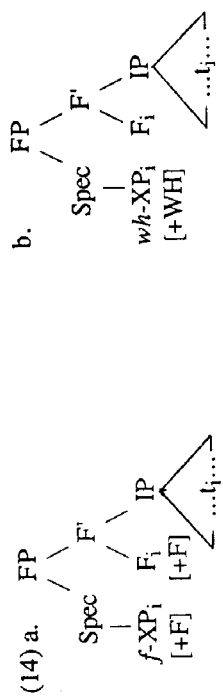
Wh-questions will figure prominently in the discussion below, the aim being to emphasize the point that the two strategies of obtaining a contrastive focus reading are basically the same strategies used in obtaining a *wh*-question reading. Moreover, just as the two strategies of forming *wh*-questions can be found in the same language, e.g. Iraqi Arabic, the two strategies of forming sentences with a contrastive focus reading can also be found in the same language, e.g. Standard Arabic.

Having said that, the parallelism between sentences with a contrastive focus reading and *wh*-questions should not be understood to mean that *wh*-phrases are (or form a subset of) *f*-phrases, as is sometimes claimed in the literature. Despite certain similarities between *f*-phrases and *wh*-phrases concerning their scope and the position they occupy when preposed, as we will see below, there are clear differences between them as far as Standard Arabic is concerned. We have seen that it is possible to obtain a contrastive focus reading with the *f*-phrase *in-situ*, when the sentence includes an F-morpheme. However, it is not possible to obtain a *wh*-question reading with the *wh*-phrase *in-situ* in Standard Arabic simple *wh*-questions (See also Tsimpli 1991 and Ouhalla 1992).

3. The identification of features.

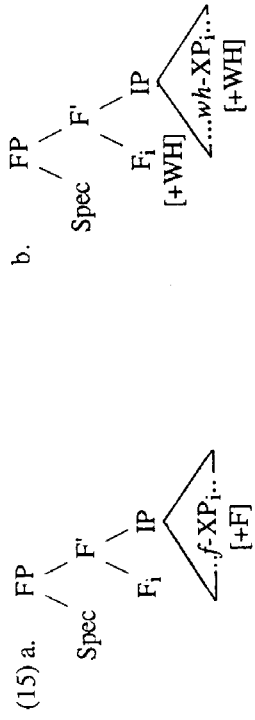
We will assume, following Choe 1987, Brody 1990, Tsimpli 1990, and Puskas (this volume), that preposed *f*-phrases and *wh*-phrases occupy the Spec position of a functional projection called Focus Phrase (FP) which exists separately from CP, although it shares properties with CP (see Rouveret 1992). This means that F (the head of FP) can be

specified for both the feature [+WH] which characterises *wh*-phrases (and *wh*-questions), and the feature [+F] which characterises *f*-phrases (and sentences with focus). Accordingly, the representation of a sentence with a preposed *f*/*wh*-phrase is as in (14a-b):



In both representations the *f*/*wh*-phrase occupying Spec-FP, preposed from an appropriate IP-internal position, is in Spec-Head agreement with F.

Another crucial assumption for the analysis to be outlined is that coindexation between the functional head F and an *f*/*wh*-phrase applies independently of whether the *f*/*wh*-phrase is in a Spec-Head agreement relation with F. Coindexation between the two categories reflects situations of feature-sharing, and applies even when the two categories are not in a Spec-Head agreement relation, e.g. situations where the *f*/*wh*-phrase is *in-situ*:



The mechanism of coindexation between F and an *f*/*wh*-phrase *in-situ*, though primarily a reflection of feature-sharing, also marks the scope of the *f*/*wh*-phrase. In other words, we are assuming C.L. Baker's (1970) view that the scope of an operator can be encoded in terms of coindexation with F (alias COMP), and does not necessarily require movement of the operator to Spec-FP at some (covert) level of representation.

With this in mind, let us now go back to the instances of contrastive focus discussed in the previous section. We need to explain why movement of the *f*-phrase to Spec-FP is necessary for the contrastive focus reading to be obtained when the sentence is not introduced by an F-morpheme, but not necessary when the sentence is introduced by an F-morpheme.

F-morpheme, but not necessary when the sentence is introduced by an F-morpheme.

As a first step, let us assume the following principle, understood as part of a more general condition on the recoverability of abstract features encoded in structural descriptions generated by the "computational system" of language:

(16) *Identification Requirement (IR)*

The (abstract) features encoded in the functional heads of Structural Descriptions must be identified.

Underlying this principle is the idea that structural descriptions come specified with abstract features which serve as instructions to the performance systems (Chomsky 1992). For example, the feature [+WH] marks a given structural description as a *wh*-question, and the feature [+F] marks a given structural description as an instance of contrastive focus, and so on. The Identification Requirement ensures that these abstract features be recoverable from the properties of surface strings. In other words, the presence of the feature [+F/+WH], for example, in a given structural description must be overtly indicated in terms of the properties of the surface string for it to be interpreted as an instance of contrastive focus or as a *wh*-question.

The identification of the abstract features can be achieved in terms of one of a range of possible mechanisms involving the phonetic, morphological and syntactic properties of sentences. For example, the *wh*-morpheme usually associated with *wh*-phrases can be said to serve the function of (morphologically) identifying the feature [+WH] associated with individual *wh*-phrases. On the other hand, the constituent focus marker *la-* in the Standard Arabic example (8b) above can be said to (morphologically) identify the feature [+F] associated with the *f*-phrase it is attached to. The reason the occurrence of this morpheme is optional is due to the availability of an alternative mechanism of identifying the feature [+F] associated with the *f*-phrase, namely tonic accent (Brody 1990).

The occurrence of the features [+F] and [+WH] which plays a comparatively more crucial role in the interpretation of structural descriptions is the one associated with F. Like their counterparts associated with individual constituents, these features are also subject to the Identification Requirement. In the Iraqi Arabic *wh*-question (13b) above, the Q-morpheme *sh* serves the function of (morphologically) identifying the feature [+WH] associated with F. On the other hand, the F-morpheme *ʔinna* in the Standard Arabic focus example (8b) serves the function of (morphologically) identifying the feature [+F] associated with F. Thus, *ʔinna* and other members of the class of *muʔakkidaat* occupy the F position, thereby accounting for their left-

peripheral linear position (for a more detailed discussion of the status of *ʔinna* see Ouhalla 1992, 1993).

In the *wh*-examples (12a) and (13a) and the focus example (8a), both of which lack a Q-/F-morpheme, the feature [+WH/+F] associated with F can be said to be identified via Spec-Head agreement with the proposed *wh*-*f*-phrase located in Spec-FP. Recall that *wh*-phrases and *f*-phrases are overtly marked for the features [+WH] and [+F], respectively, and therefore can identify the presence under F of a feature identical to the one which they are overtly marked for. Obviously, Spec-Head agreement is not a property of surface strings, but an abstract structural relation. What is intended here are the surface reflexes of Spec-Head agreement relations, such as adjacency relations properly defined to exclude irrelevant cases. We will continue to make use of the notion 'Spec-Head agreement', bearing in mind that it is the reflection of this relation in surface strings which is intended.

The analysis outlined amounts to saying that sentences which can receive a *wh*-question reading or a contrastive focus reading are precisely the ones where the feature [+WH/+F] associated with the functional head F is identified, either morphologically in terms of a Q-/F-morpheme or syntactically in terms of Spec-Head agreement with a *wh*-*f*-phrase. It follows from this situation that sentences where the feature [+WH/+F] associated with F is not identified will not receive a *wh*-question/contrastive focus reading. This is precisely the situation with echo-questions and sentences with a new focus reading.

The echo-question in (17a) below is reproduced from above. (17b) is a (genuine) multiple *wh*-question, included here for comparison. Both examples are from Standard Arabic, which (remember) lacks the *wh*-*itr* strategy:

- (17) a. qaabal-a Zayd-un man!
meet -3M Zayd-NOM who
'Zayd met who!'
b. man qaabal-a man?
who meet -3M who
'Who met who?'

Given that echo-questions are not (genuine) *wh*-questions, it is plausible to assume that they lack the feature [+WH] under F, that is the feature which "types" *wh*-questions (Cheng 1991). However, in the present context, where features exist insofar as there is an overt indication for their presence, a more appropriate view to take is to say that (17a) fails to receive a *wh*-question reading because it lacks an overt indication for the presence of the feature [+WH] under F. Whether the structural description of (17a) includes the feature [+WH] under F is beside the point.

The multiple *wh*-question (17b) differs crucially in that it includes an overt indication for the presence of the feature [+WH] under F, namely the presence of a *wh*-phrase in Spec-FP. In other words, this example includes a preposed *wh*-phrase located in Spec-FP which indicates (via Spec-Head agreement) the presence of the feature [+WH] under F, and hence the fact that it receives a *wh*-question reading. This is a desirable outcome insofar as it captures the well-known generalisation that in Standard Arabic/English-type languages *wh*-phrases *in-situ* are "licensed" by the presence of another *wh*-phrase in Spec-FP (Spec-CP). In the present framework, the licensing of a *wh*-phrase *in-situ* in multiple *wh*-questions amounts to the identification of the feature [+WH] under F via Spec-Head agreement with the *wh*-phrase in Spec-FP. In other words, the issue is not whether a given *wh*-phrase can be "licensed" *in-situ*, but whether the sentence which includes the *wh*-phrase also includes an indication for the presence of the feature [+WH] under F.

Moving on to sentences with a new (information) focus reading, the Standard Arabic example (18) below is reproduced from above:

- (18) zallaf -at Zaynab-u QASIIDAT-AN
 write(PERF)-3F Zaynab-NOM poem -ACC
 'Zaynab has written a poem.'

Note that the *f*-phrase in this example does not have the broad scope typical of *f*-phrases which have a contrastive focus reading (i.e. the reading paraphrased with the cleft-formula 'it is f-XP ...'). Rather, (18) has a reading which is essentially neutral (Moutaouakil 1989), as shown by the English translation. In view of this, it could be argued that the representation of sentences such as (18) lacks the feature [+F] under F, that is the feature which marks the scope of an *f*-phrase. However, here again the issue is not whether the structural description of (18) includes the feature [+F] under F, but whether it includes an overt indication for the presence of this feature. (18) fails to receive a contrastive focus reading because it lacks an overt indication for the presence of the feature [+F] under F.

Sentences with a new (information) focus reading are (in a sense) the counterparts of echo-questions. Just as echo-questions are not (genuine) *wh*-questions, sentences with a new focus reading are not genuine instances of focus. It seems that the notion 'focus' is restricted to contrastive (or identificational) focus, at least as far as Standard Arabic is concerned. In the rest of this paper, we will use the term 'focus' to mean contrastive focus.

4. Negation and focus.

We have seen that the scope of *maa* can cover a whole sentence (19a) or be restricted to a preposed constituent which appears immediately following it (19b):

- (19) a. *maa* ?allaf-at Zaynab-u riwaayat-an
 NEG write -3F Zaynab-NOM novel-ACC
 'Zaynab has not written a novel.'
 b. *maa* riwaayat-an ?allaf -at Zaynab-u (bal qasidat-an)
 NEG novel-ACC write -3F Zaynab-NOM but poem-ACC
 'It is not a novel that Zaynab has written (but a poem).'

In (19a) *maa* asserts the falsity of the proposition that Zaynab has written a novel. In (19b), however, *maa* asserts the falsity of the claim that what Zaynab has written is a novel. As pointed out above, the two sentences do not share the same presuppositions.

There is a clear sense in which, in certain contexts, *maa* has a function similar to that of ?inna, albeit in a negative sense. Like the affirmative ?inna, the negative *maa* can also "license" a contrastive *f*-phrase *in-situ*:

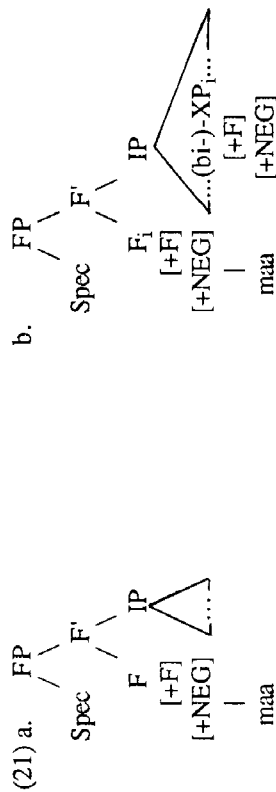
- (20) a. *maa* ?allaf-at Zaynab-u RIWAAYAT-AN (bal qasidat-an)
 NEG write -3F Zaynab-NOM novel-ACC but poem-ACC
 'It is not a novel that Zaynab has written (but a poem).'
- b. *maa* ?anaa SHAA'IR-UN (bal rasuul -un ...)
 NEG I poet-NOM but messenger-NOM ...
 'It is not a poet that I am (but a messenger ...).'
- c. *maa* ?anaa BI-SHAA'IR-IN (bal rasuul -un ...)
 NEG I FM-poet-GEN but messenger-NOM
 'It is not a poet that I am (but a messenger ...).'

As shown by the continuations in parentheses and the English translations, in all three examples the scope of *maa* is restricted to the *f*-phrase *in-situ*. Thus, (20a) has a presupposition which is identical to that of (19b) above, even though the *f*-phrase occupies different positions in the two sentences.

Note that while *maa* is the negative counterpart of ?inna, the prefix *bi-* attached to the *f*-predicate in (20c) is the negative counterpart of the constituent focus marker *la-*. Thus, *bi-* is a correlate of the negative *maa*, just as *la-* is a correlate of the affirmative ?inna. In the present framework, this means that the morpheme *bi-* serves the function of identifying the feature-complex [+F, +NEG] associated with the phrase which is negatively focused. The occurrence of *bi-* is optional for the same reason that the occurrence of the affirmative *la-* is also optional, although the implication seems to be that tonic accent can serve to

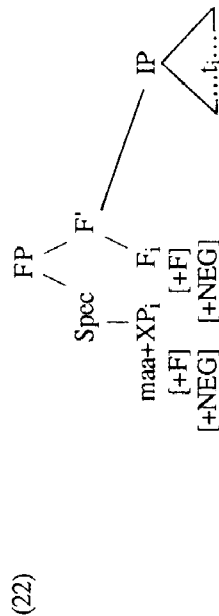
identify the feature-complex [+F, +NEG], or the feature [+F] (For a more detailed discussion of the morpheme *bi-* see Ouhalla 1992, 1993).

The parallelism with *?inna* suggests that the negative *maa* in examples (19a) and (20a-c) also occupies the F position, where it identifies the feature-complex [+F, +NEG] associated with F. *Maa* differs from *?inna* and other F-morphemes only in that it marks the feature [+NEG] in addition to the feature [+F], meaning it is a marker of what we have been calling negative contrastive focus. The representations of sentences such as (19a) and (20a-c) are as follows:



(21a) corresponds to (19a), where the whole sentence is negatively focused, and (21b) corresponds to examples (20a-c), where only a constituent of the sentence is negatively focused. The focused constituent is coindexed with F, by virtue of the fact that it shares with it the feature-complex [+F, +NEG].

Example (19b), where *maa* precedes the preposed object it modifies, involves a slightly different situation. On the assumption that the preposed *f*-phrase occupies Spec-FP, *maa* cannot be said to occupy F. Rather, in this situation *maa* forms a constituent with the preposed object, with the complex *maa*+XP located in Spec-FP. To use more standard terminology, *maa* in this situation is base-generated IP-internally together with the *f*-phrase and moves along with it to Spec-FP. The representation involved is as in (22):



Thus, *maa* can also function as a constituent focus marker, although the terminology is a bit confusing. Recall that in (20a-c), with the representation shown in (21b), *maa* functions as a constituent marker insofar as its scope is restricted to the constituent coindexed with it, even

though the two elements are located in separate positions. Note, incidentally, that the status of *maa* illustrated in (22) suggests an alternative analysis for (19a), whereby *maa* has the status of a constituent focus marker base-generated attached to IP and moves along with it to Spec-FP. We will not explore this possibility here, although nothing seems to exclude it.

Presumably, movement of the complex *maa*+XP to Spec-FP in (19b/22) is motivated by the need to identify the feature-complex [+F, +NEG] associated with F, via Spec-Head agreement. As in the previous situations, it is the identification of the features of F which makes the intended reading possible. As expected, situations where the complex *maa*+XP fails to move to Spec-FP result in a failure to obtain a negative focus reading:

- (23) a. *?allaf-at Zaynab-u maa riwaayat-an
write -3F Zaynab-NOM FM novel-ACC
'It is not a novel Zaynab has written.'
b. *?inna Zaynab-a ?allaf-at maa riwaayat-an
FM Zaynab-ACC write -3F FM novel-ACC
'It is not a novel Zaynab has written.'

Note with respect to (23b) that although the feature [+F] of F can be said to be identified by the F-morpheme *?inna*, the feature [+NEG] remains unidentified, so that there is an inconsistency between the feature-specifications of the *f*-phrase overtly marked by *maa* and the feature-specifications of F overtly indicated by *?inna*.

Assuming the analysis outlined to be on the right track, *maa* does not project a NegP, but acts as a morphological marker of what we have called negative contrastive focus. This analysis of *maa* is dictated by the (contrastive) focus reading it tends to have, its scope properties, as well as by its distribution. The analysis has been carried out within a framework which makes the interpretation of sentences dependent on them including overt material which indicates the presence of appropriate features encoded in appropriate functional heads (in this case F). Accordingly, whether a given sentence can or cannot have a (contrastive) focus reading depends on whether it includes overt information which indicates the presence of the feature [+F] under F.

We have seen that the other negation element *laa* has different properties, and therefore is not likely to have the same status. We will see below that *laa*, unlike *maa*, projects a NegP, and interacts with T(ense) and other functional categories in significant ways. First, we need to look at the tense system in Standard Arabic.

5. Tense and Agreement.

Consider the following examples:

- (24) a. *sa(wfa) t- adrusu Zaynab-u al-riyaadiyaat*
 will 3F-study(IMPERF) Zaynab-NOM the-Maths
 'Zaynab will study Maths.'
 b. *daras -at Zaynab-u al-riyaadiyaat*
 study(PERF)-3F Zaynab-NOM the-Maths
 'Zaynab has studied Maths.'
 c. *t- adrusu Zaynab-u al-riyaadiyaat*
 3F-study(IMPERF) Zaynab-NOM the-Maths
 'Zaynab studies/is studying Maths.'

(24a) has a future tense reading, conveyed by the Modal element *sa(wfa)*. Like *2inna* and related elements, *sa(wfa)* also has a modality reading, insofar as it can also express intention (willingness) and determination, just like its English counterpart *will*. Moreover, like *2inna* and similar elements, *sa(wfa)* also occupies a left-peripheral position in the sentence. All these facts, among others, indicate that *sa(wfa)* occupies the same position as *2inna*, namely F (for a discussion of sentences which include both *2inna* and *sawfa* see Ouhalla 1992, 1993).

(24b) has a past tense reading, as well as a perfective aspect reading, conveyed by the perfective form of the verb (Comrie 1977, Dahl 1985). In this respect perfective forms differ from the imperfective ones in that the latter do not carry any tense information at all. This is shown by the fact that it is the imperfective forms which appear in sentences where tense is encoded separately, either by an independent morpheme in the same clause, as in (24a) above, or by a different verb form in a root clause, as in the following control examples:

- (25) a. *haawal -a 2an y- ahriba*
 try(PERF)-3MS to 3MS-escape(IMPERF)
 'He has tried to escape.'
 b. *rafad -a 2an y- ughaadira al-bayt -a*
 refuse (PERF)-3MS to 3MS-leave the-house-ACC
 'He has refused to leave the house.'

The embedded clause in these examples does not have a tense reading independent of that of the root clause, confirming the view that imperfective forms, contrary to their perfective counterparts, do not carry tense information.

The idea that the imperfective forms do not mark tense seems, initially, to be incompatible with the fact that they apparently can convey a present tense reading, as is the case in (24c). However, it has

often been argued that present tense in Standard Arabic is derived via a default mechanism (Fassi Fehri 1982). To borrow an expression from Comrie (1977), the present tense in examples such as (24c) is an "elimination present", in the sense that it is arrived at by eliminating the future tense reading on the basis of the absence of the future Modal, and the past tense reading on the basis of the absence of the perfective form of the verb.

Assuming this to be the case, there are at least two possible ways the idea can be formally implemented. One possibility is that Standard Arabic lacks a (positively specified) present tense feature (i.e. [+present]), the only existing tense feature in the language being [+/-past]. This would arguably account for the default nature of the present tense in the language. However, this possibility raises (the more general and rather intractable) question of whether the X-bar projections of a given category, in this case T, can be justified in the absence of a relevant feature or in terms of a negatively specified feature, i.e. [-past].

The other possibility is that Standard Arabic instantiates a (positively specified) tense feature, thereby justifying the X-bar projections of T. The default nature of the present tense can then be attributed to the lack of a present tense morpheme to identify the tense feature encoded in the functional category T. It is interesting to note that sentences such as (24c) above have, to use more accurate terminology, a non-specific or generic (Enç 1991) tense reading, as opposed to a specific tense reading imposed, for example, by a temporal adverb. According to this view, the situation of present tense would be rather similar to the more familiar result of being unidentified by an appropriate overt morpheme (Rizzi 1986). This is the view we will assume in the discussion below, although nothing crucial hinges on this decision.

The fact that the perfective forms convey past implies in the present context that they include an overt marker of past tense. One view often entertained in the literature is that information relating to past tense, as well as aspect, is marked by the vocalic tier of the perfective forms. Another view, entertained by some traditional grammarians, is that past tense is marked separately from aspect, by the subject agreement morpheme.

To understand the latter view, consider the rather puzzling fact that Standard Arabic has two subject agreement paradigms, one appears with the perfective forms (perfective agreement) and the other with the imperfective forms (imperfective agreement). The two paradigms are illustrated in (26a-b) below using the third person (masculine) singular markers:

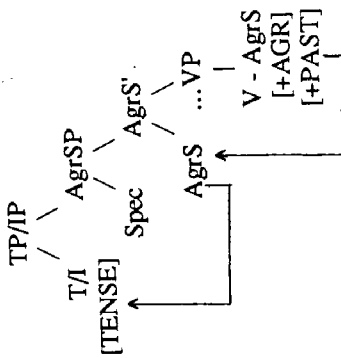
- (26) a. nadham -a Zayd-un shi'r-an
write(PERF)-3S Zayd-NOM poetry-ACC
'Zayd has written poetry.'
- b. ya-ndhumu Zayd-un shi'r-an
3S-write Zayd-NOM poetry-ACC
'Zayd writes poetry.'

The perfective agreement morpheme in (26a) is a suffix, whereas its imperfective counterpart in (26b) is a prefix. The perfective agreement morphemes are all suffixes, whereas their imperfective counterparts are either prefixes or a combination of a prefix and a suffix.

This otherwise mysterious property of the language ceases to be so in the context of the view that the perfective agreement morphemes mark past tense, whereas the imperfective agreement morphemes do not mark tense at all. In other words, the existence of two distinct agreement paradigms in the language can be justified on the grounds that members of the perfective paradigm mark tense as well as agreement, whereas members of the imperfective paradigm mark agreement only. Given what has been said about the dual nature of *maa* as a marker of negation and focus, the idea that perfective agreement morphemes mark both tense and agreement should not come as a surprise (for a discussion of other morphemes in Standard Arabic which also have a dual function see Ouhalla 1992, 1993).

This view makes it possible to represent aspect and (past) tense separately from each other. Aspect is represented in terms of the vowels internal to the verb root (both perfective and imperfective), whereas tense is represented in terms of the perfective agreement morphemes. Aspectual morphology, which is essentially non-concatenative in nature, is lexical insofar as it determines the categorial nature of verbs (consonantal roots are neutral with respect to categorial features, as they can also form the base for the derivation of other categories). On the other hand, agreement morphology, which consists of affixes, is syntactic. The syntactic nature of subject agreement morphology will be understood here to mean that it corresponds to projected functional categories in the structure (AgrS and T) which encode similar features.

With this in mind, let us now see how the derivation of a sentence such as (24b), where the verb is in the perfective form, proceeds. The structure of the sentence adopted here is the one outlined in (27) below, where T/I is higher than AgrS (Ouhalla 1988, Benmamoun 1990, 1992), and where [+AGR] is a cover term for the usual agreement features:



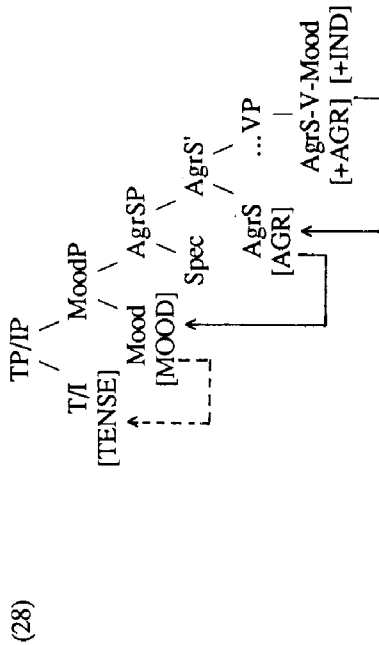
The verb is lexically specified for the agreement and tense features (Chomsky 1992), in much the same way *f-wh*-phrases were said above to be specified for the features [+F] and [+WH]. The agreement and tense features of the verb are both morphologically identified by the perfective agreement morpheme, again just as the negation and focus features of negative *f*-phrases were said above to be identified by the morpheme *maa* prefixed to the *f*-phrase. The representation in (27) includes other instantiations of the agreement and tense features, this time separately under AgrS and T/I, respectively. In order for these features to be identified, the complex V+AgrS moves first to AgrS and then to T/I.

According to this analysis movement of the verb complex to AgrS and T/I is driven by the Identification Requirement in the same way that movement of an *f-wh*-phrase to Spec-FP was said above to be driven by the Identification Requirement. In view of this, the derivation of sentences such as (24c) and (26b), where the verb is in the imperfective form, must be slightly different from the one outlined in (27). Given the conclusion that the imperfective agreement morphemes do not mark tense, movement of the complex V+AgrS (beyond AgrS) to T/I is not motivated, and therefore does not apply. Now, on the assumption that in sentences with the VSO order the subject occupies the canonical subject position, i.e. Spec-AgrSP (see Ouhalla 1992 for arguments to this effect), the absence of V+AgrS-movement to T/I would not derive the appropriate order. Unless the verb complex is independently shown to move to an additional position between AgrS and T/I, the analysis would not go through.

A close look at the morphology of the verb complex reveals that such a position exists. In addition to the AgrS morpheme, verbs in Standard Arabic are inflected for a morpheme which indicates mood: indicative (IND), subjunctive (SUBJ) or jussive/imperative (JUSS). Restricting ourselves to the indicative mood for the moment (the other moods are illustrated in the next section), the indicative morpheme in (26b) is the suffix *-u*, so that a more detailed representation of the verb

complex *ya-ndhum-u* is 'AgrS-V-IND'. In the present framework, where inflectional morphology reflects the presence of features which it serves to identify, the presence of the mood markers on the verb complex implies that the verb is specified for a mood feature (in addition to the agreement and tense features), and that the structural description of sentences in Standard Arabic includes a functional category Mood (a similar suggestion for Modern Greek is made in Tsimpli 1990).

Pending the discussion of the evidence in the next section, we will assume that Mood is located between AgrS and T/I. Accordingly, the derivation of a sentence with an imperfective verb, such as (26b), is as outlined in (28):



The verb may or may not be specified for the tense feature, the point is that there is no morphological indication of its presence. The verb complex moves to AgrS and then to Mood to identify the agreement and mood features they encode. In sentences where the tense feature of T/I remains unidentified, e.g. (24c) and (26b), T/I receives the default generic reading, as explained earlier. Note that movement of the verbal complex to the functional head Mood ensures the derivation of the VSO order in sentences with an imperfective verb. Obviously, the structure of sentences with a perfective verb also includes a Mood category, although the presence of this category does not play a crucial role in the derivation of the VSO order.

6. Negation and tense.

Having examined the tense system in the language and its representation, we are now in a position to examine how the negation element *laa* interacts with tense.

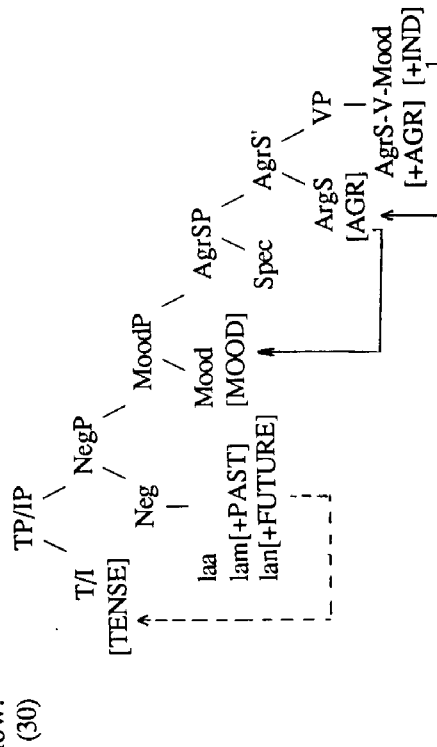
As a matter fact, *laa* also interacts with mood, albeit in a different way. The basic examples cited above are reproduced here with additional information relating to mood:

- (29) a. *laa y-uhibb-u* Zayd-un al-qiraa?at-a
 NEG 3M-like -IND Zayd-NOM the-reading -ACC
 'Zayd does not like reading.'
 b. *lan t-usaafir-a* Zaynab-u
 NEG+FUT 3F-travel -SUBJ Zaynab-NOM
 'Zaynab will not travel.'
 c. *lam y-ughadir* Zayd-un al-balad -a
 NEG+PAST 3M-leave(JUSS) Zayd-NOM the-country-ACC
 'Zayd has not left the country.'

Although *laa* and its temporal variants all require the imperfective form of the verb, each of them requires a different mood form. The temporally unmarked *laa*, illustrated in (29a), requires the indicative form, marked with the suffix *-u*. The future *lan*, illustrated in (29b), requires the subjunctive (SUBJ) form, marked with the suffix *-a*. Finally, the past *lam*, illustrated in (29c), requires the jussive/imperative (JUSS) form, traditionally said to be marked with a "zero-morpheme".

The question of why each variant of *laa* requires a different mood form is a rather intractable one, and will not be addressed here. The facts illustrated in (29a-c) are important insofar as they show, first, that verbs in Standard Arabic are invariably marked for mood, and, secondly, that the functional category Mood must be located lower than T. This is suggested by the fact that mood appears on the verb complex, together with the imperfective agreement elements, whereas tense appears on the negative complex. The verb complex moves to the functional head Mood for the purpose of identifying the mood feature it encodes, whereas the negative complex moves from Neg to T/I to identify the tense feature encoded in T/I.

Accordingly, examples (29a-c) have the derivation shown in (30) below:



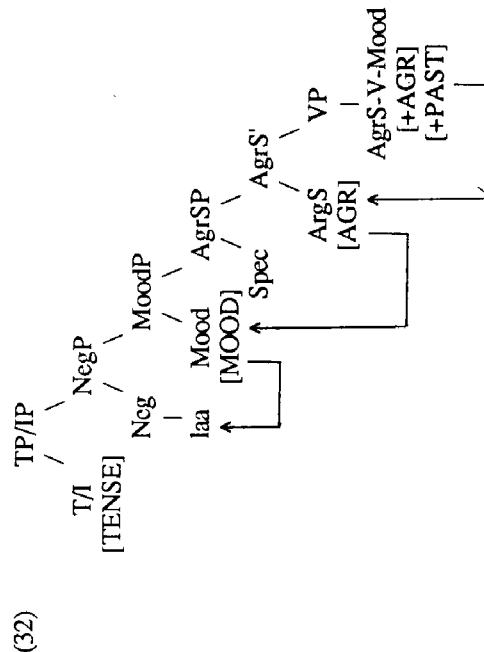
Starting with (29a), the (unmarked) negation element *laa* is not morphologically marked for tense, and therefore does not move to T/I. Consequently, the tense feature of T/I remains unidentified, and hence the fact that it receives the (default) generic reading, and hence the negation element *lan/lam* is morphologically marked for tense, and therefore moves to T/I to identify the tense feature of T/I. In all three examples, the verb complex moves to AgrS and Mood, to identify the agreement and mood features encoded in these categories.

It was suggested above that the so-called "negative auxiliary" *laysa* is arguably decomposable into the unmarked negation element *laa* and a verbal element, in addition to the agreement morpheme:

- (31) a. *lays* -at Zaynab-u shaa'irat-an
 NEG+V(PERF)-3F Zaynab-NOM poet-ACC
 'Zaynab is not a (female) poet.'
 b. Zaynab-u shaa'iri-un
 Zaynab-NOM poet-NOM
 'Zaynab is a (female) poet.'

Negative sentences such as (31a) have the rather intriguing property that the agreement morphology which appears with *laysa* belongs to the perfective paradigm, and yet they have a (present tense) generic reading, just like nominal sentences such as the one in (31b). As a matter of fact, this property of *laysa* is often cited as a counterexample to the idea (adopted here) that perfective agreement marks past tense.

However, there is a plausible account for this unusual property of *laysa* in the present framework. Sentences with *laysa* have the derivation outlined in (32):



The fact that it is the temporally unmarked form *laa* which appears with *laysa* implies that *laa* does not move to T/I. Consequently, the tense feature of T/I remains unidentified, and hence the (default) generic tense reading associated with *laysa*-sentences of the type illustrated in (31a). In other words, sentences with *laysa* receive a generic tense reading for the same reason as sentences such as (29a) and others. Note that although the verb carries an agreement morpheme which overtly marks past tense, this morpheme cannot identify the tense feature of T/I due to failure of the verb complex to move beyond Neg.

To the extent that the analysis outlined is viable, *laa* and its temporal variants head a NegP which interacts with other functional categories in terms of head-movement processes. The system of identification outlined above on the basis of the distribution of *maa* and focus elements in general also seems to account for the distribution and properties of *laa* and the way it interacts with V-movement. The underlying idea is that the Identification Requirement motivates movement of the verb complex in much the same way it was shown above to motivate movement of *f-wh*-phrases to Spec-PP.

7. Conclusion.

The major aim of this paper has been to argue that the two negation elements in Standard Arabic, *maa* and *laa*, do not have the same status. *Maa* marks negative contrastive focus, and can either occupy the head position of the functional projection which hosts *f-wh*-phrases, or form a constituent with a phrase which is negatively focused. *Laa*, on the other hand, heads a NegP, and moves to T/I when it overtly marks the tense value of the sentence.

The status of *maa* as a marker of (contrastive) focus necessitated a close look at the focus system in the language, and the fact that *laa* interacts with tense necessitated a close look at the tense system in the language. With respect to focus, it was observed that the contrastive focus reading (negative or affirmative) is obtained either by preposing the *f*-phrase (to Spec-PP) or by leaving it *in-situ* and including an F-morpheme under F. *Maa* can function as a constituent focus morpheme, in which case it is preposed together with the *f*-phrase it is attached to, or as an F-morpheme located under F, with the *f*-phrase *in-situ*.

With respect to the tense system, it was argued that the past tense conveyed by the perfective forms is marked by the perfective agreement morphemes. These morphemes are generated as inflectional members of the verb complex, which also includes the mood morpheme. The verb complex then moves to the functional heads AgrS, Mood and T/I to identify the appropriate features they encode. In contrast, the imperfective agreement morphemes do not mark tense, and consequently a verb complex bearing an imperfective agreement morpheme does not move to T/I. Lack of identification of the tense

feature of T/I in sentences with an imperfective verb results in a (default) generic (or non-specific) tense reading. This is the case with negative sentences which instantiate the unmarked negation element *laa*. The future and past tense variants of *laa*, namely *lan* and *lam*, are (overtly) marked for tense, and therefore identify the tense feature of T/I subsequent to their movement from Neg where they are generated. The sentences which instantiate these elements have a specific (or non-generic) tense reading.

The analyses outlined for the negation elements and the grammatical phenomena they interact with have been framed within a model which assumes that the abstract features encoded in the structural descriptions generated by the computational system of language are subject to an Identification Requirement which ensures their recoverability from properties of surface strings. The mechanisms of identification can draw upon the phonetic or morphological properties of the language, or on well-defined adjacency relations which reflect the syntactic relation of Spec-Head agreement. In this framework, all movement processes are motivated by the Identification Requirement, that is the need to identify features encoded in the relevant functional heads. Lack of identification results in a failure to obtain certain readings, e.g. the contrastive focus reading or the *wh*-question reading, and in the case of referential features, such as the (pronominal) agreement features and the tense features, it results in a generic (non-specific) reading.

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